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Phe Ala Ile Ala Arg Arg Leu Ala Gln Asp Gly Ala His Val Val

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Pro P	Phe	Phe	Gly	Ser 125	Ile	Met	Asp	Val	Thr 130	Glu	Glu	Val	Trp	Asp 135
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Phe Val Pro Arg Pro His Thr Ala Pro Leu Gly Gly Ala His Ala

His Val Leu Gly Met Val Pro Pro Ala Cys Leu Pro Gly Asp Glu

Val Gly Ser Glu Gln Arg Gly Glu Gln Val Thr Asn Gly Arg Glu

Ala Gly Ala Glu Leu Leu Thr Glu Val Asn Arg Leu Gly Ser Gly 100

Ser Ser Ala Ala Ser Glu Glu Glu Glu Glu Glu Glu Pro Pro 115 110 Arg Arg Thr Leu His Leu Arg Arg Asn Arg Ile Ser Asn Cys Ser 125 130 Gln Arg Ala Gly Ala Arg Pro Gly Ser Leu Pro Glu Arg Lys Gly Pro Glu Leu Cys Leu Glu Glu Leu Asp Ala Ala Ile Pro Gly Ser Arg Ala Val Gly Gly Ser Lys Ala Arg Val Gln Ala Arg Gln Val 170 Pro Pro Ala Thr Ala Ser Glu Trp Arg Leu Ala Gln Ala Gln Gln 190 Lys Ile Arg Glu Leu Ala Ile Asn Ile Arg Met Lys Glu Glu Leu Ile Gly Glu Leu Val Arg Thr Gly Lys Ala Ala Gln Ala Leu Asn Arg Gln His Ser Gln Arg Ile Arg Glu Leu Glu Gln Glu Ala Glu Gln Val Arg Ala Glu Leu Ser Glu Gly Gln Arg Gln Leu Arg Glu 245 Leu Glu Gly Lys Glu Leu Gln Asp Ala Gly Glu Arg Ser Arg Leu Gln Glu Phe Arg Arg Val Ala Ala Ala Gln Ser Gln Val Gln 275 Val Leu Lys Glu Lys Lys Gln Ala Thr Glu Arg Leu Val Ser Leu 295 Ser Ala Gln Ser Glu Lys Arg Leu Gln Glu Leu Glu Arg Asn Val 305 310 315 Gln Leu Met Arg Gln Gln Gln Gly Gln Leu Gln Arg Arg Leu Arg 320 325 Glu Glu Thr Glu Gln Lys Arg Arg Leu Glu Ala Glu Met Ser Lys 335 340 Arg Gln His Arg Val Lys Glu Leu Glu Leu Lys His Glu Gln Gln 355 Gln Lys Ile Leu Lys Ile Lys Thr Glu Glu Ile Ala Ala Phe Gln 365 370 375 Arg Lys Arg Arg Ser Gly Ser Asn Gly Ser Val Val Ser Leu Glu Gln Gln Gln Lys Ile Glu Glu Gln Lys Lys Trp Leu Asp Gln Glu

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Leu Ser Leu Lys Glu Thr Arg Arg Cys Gly Ser Thr Cys Thr Phe
65 70 75

Trp Pro Cys Phe Glu Leu Cys Cys Pro Glu Ser Phe Gly Pro Gln 80 85 90

Gln Lys Phe Leu Val Lys Leu Arg Val Leu Gly Met Lys Ser Gln 95 100 105

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Glu Leu Gly Arg Pro Ala Arg Asp Glu Gly Gly Ser Gly Arg Asp
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Trp Lys Ser Lys Ser Gly Arg Gly Leu Ala Gly Arg Glu Pro Trp
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Ser Lys Leu Lys Gln Ala Trp Val Ser Gln Gly Gly Ala Lys 95 100 105

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Glu Ala Leu Ala Ala Ala Gln Asp Ala Ile Gly Pro Glu Leu 125 130 135

Ala Pro Thr Pro Glu Pro Pro Glu Glu Tyr Val Tyr Pro Asp Tyr
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Arg Gly Lys Gly Cys Val Asp Glu Ser Gly Phe Val Tyr Ala Ile 155 160 165

Gly Glu Lys Phe Ala Pro Gly Pro Ser Ala Cys Pro Cys Leu Cys 170 175 180

Thr Glu Glu Gly Pro Leu Cys Ala Gln Pro Glu Cys Pro Arg Leu 185 190 195

His Pro Arg Cys Ile His Val Asp Thr Ser Gln Cys Cys Pro Gln 200 205 210

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<211> 437

<212> PRT

<213> Homo sapiens

<400> 16

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His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys
35 40 45

Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met 50 55 60

Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly 65 70 75

Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg
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Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg 95 100 105

Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp 110 115 120

Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val 125 130 135

Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile 140 145 150

Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu 155 160 165

Arg Gly Gly Gle Phe Ser Asn Leu Arg Val Gln Gly Cys Met 170 175 180

Pro Gln Pro Gly Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly 185 190 195

Pro Val Gly Met Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr 200 205 210

Cys His Arg Gly Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln
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Glu Pro Thr Asp Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val

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Gln Asn Ser Gln	Lys Thr Thr 275	Ile His Ser A	Ala Pro Pro Gly	y Val 285
Leu Val Ala Ser	Tyr Thr His 290	Phe Cys Ser 9	Ser Asp Leu Cy	s Asn 300
Ser Ala Ser Ser	Ser Ser Val	Leu Leu Asn S	Ser Leu Pro Pro	315
Ala Ala Pro Val	Pro Gly Asp	Arg Gln Cys I 325	Pro Thr Cys Va	l Gln 330
Pro Leu Gly Thr	Cys Ser Ser 335	Gly Ser Pro A	Arg Met Thr Cy	s Pro 345
Arg Gly Ala Thr	His Cys Tyr 350	Asp Gly Tyr 3	Ile His Leu Se	r Gly 360
Gly Gly Leu Ser	Thr Lys Met 365	Ser Ile Gln (	Gly Cys Val Ala	a Gln 375
Pro Ser Ser Phe	Leu Leu Asn 380	His Thr Arg (	Gln Ile Gly Il	e Phe 390
Ser Ala Arg Glu	Lys Arg Asp 395	Val Gln Pro 1 400	Pro Ala Ser Gl	n His 405
Glu Gly Gly Gly	Ala Glu Gly 410	Leu Glu Ser 1 415	Leu Thr Trp Gl	y Val 420
Gly Leu Ala Leu	Ala Pro Ala 425	Leu Trp Trp (	Gly Val Val Cy	s Pro 435
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<210> 17

<211> 2387

<212> DNA

<213> Homo sapiens

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<210> 18 <211> 487

<212> PRT

<213> Homo sapiens

<400> 18

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Ser Leu Leu Glu Pro Arg Asp Pro Val Ala Ser Ser Leu Ser Pro 35 40 45

Tyr Phe Gly Thr Lys Thr Arg Tyr Glu Asp Val Asn Pro Val Leu
50 55 60

Leu Ser Gly Pro Glu Ala Pro Trp Arg Asp Pro Glu Leu Leu Glu
65 70 75

Gly Thr Cys Thr Pro Val Gln Leu Val Ala Leu Ile Arg His Gly
80 85 90

Thr Arg Tyr Pro Thr Val Lys Gln Ile Arg Lys Leu Arg Gln Leu 95 100 105

His Gly Leu Leu Gln Ala Arg Gly Ser Arg Asp Gly Gly Ala Ser

				110					115					120
Ser	Thr	Gly	Ser	Arg 125	Asp	Leu	Gly	Ala	Ala 130	Leu	Ala	Asp	Trp	Pro 135
Leu	Trp	Tyr	Ala	Asp 140	Trp	Met	Asp	Gly	Gln 145	Leu	Val	Glu	Lys	Gly 150
Arg	Gln	Asp	Met	Arg 155	Gln	Leu	Ala	Leu	Arg 160	Leu	Ala	Ser	Leu	Phe 165
Pro	Ala	Leu	Phe	Ser 170	Arg	Glu	Asn	Tyr	Gly 175	Arg	Leu	Arg	Leu	Ile 180
Thr	Ser	Ser	Lys	His 185	Arg	Cys	Met	Asp	Ser 190	Ser	Ala	Ala	Phe	Leu 195
Gln	Gly	Leu	Trp	Gln 200	His	Tyr	His	Pro	Gly 205	Leu	Pro	Pro	Pro	Asp 210
Val	Ala	Asp	Met	Glu 215	Phe	Gly	Pro	Pro	Thr 220	Val	Asn	Asp	Lys	Leu 225
Met	Arg	Phe	Phe	Asp 230	His	Суѕ	Glu	Lys	Phe 235	Leu	Thr	Glu	Val	Glu 240
Lys	Asn	Ala	Thr	Ala 245	Leu	Tyr	His	Val	Glu 250	Ala	Phe	Lys	Thr	Gly 255
Pro	Glu	Met	Gln	Asn 260	Ile	Leu	Lys	Lys	Val 265	Ala	Ala	Thr	Leu	Gln 270
Val	Pro	Val	Asn	Asp 275	Leu	Asn	Ala	Asp	Leu 280	Ile	Gln	Val	Ala	Phe 285
Phe	Thr	Cys	Ser	Phe 290	Asp	Leu	Ala	Ile	Lys 295	Gly	Val	Lys	Ser	Pro 300
Trp	Cys	Asp	Val	Phe 305	Asp	Ile	Asp	Asp	Ala 310	Lys	Val	Leu	Glu	Tyr 315
Leu	Asn	Asp	Leu	Lys 320	Gln	Tyr	Trp	Lys	Arg 325	Gly	Tyr	Gly	Tyr	Thr 330
Ile	Asn	Ser	Arg	Ser 335	Ser	Cys	Thr	Leu	Phe 340	Gln	Asp	Ile	Phe	Gln 345
His	Leu	Asp	Lys	Ala 350	Val	Glu	Gln	Lys	Gln 355	Arg	Ser	Gln	Pro	Ile 360
Ser	Ser	Pro	Val	Ile 365	Leu	Gln	Phe	Gly	His 370	Ala	Glu	Thr	Leu	Leu 375
Pro	Leu	Leu	Ser	Leu 380	Met	Gly	Tyr	Phe	Lys 385	Asp	Lys	Glu	Pro	Leu 390
Thr	Ala	Tyr	Asn	Tyr 395	Lys	Lys	Gln	Met	His 400	Arg	Lys	Phe	Arg	Ser 405

Gly Leu Ile Val Pro Tyr Ala Ser Asn Leu Ile Phe Val Leu Tyr 420

His Cys Glu Asn Ala Lys Thr Pro Lys Glu Gln Phe Arg Val Gln 435

Met Leu Leu Asn Glu Lys Val Leu Pro Leu Ala Tyr Ser Gln Glu 450

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<213> Homo sapiens

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<sup>&</sup>lt;210> 20

<sup>&</sup>lt;211> 310

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

<sup>&</sup>lt;400> 20

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Ile Trp Phe Pro Glu Glu Lys Pro Leu Pro Thr Ala Phe Leu Val

Asp Thr Ser Glu Glu Ala Leu Leu Leu Pro Asp Trp Leu Lys Leu
50 55 60

Arg Met Ile Arg Ser Glu Val Leu Arg Leu Val Asp Ala Ala Leu
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Gln Asp Leu Glu Pro Gln Gln Leu Leu Leu Phe Val Gln Ser Phe 80 85 90

Gly Ile Pro Val Ser Ser Met Ser Lys Leu Gln Phe Leu Asp 95 100 105

Gln Ala Val Ala His Asp Pro Gln Thr Leu Glu Gln Asn Ile Met 115 110 Asp Lys Asn Tyr Met Ala His Leu Val Glu Val Gln His Glu Arg 130 125 Gly Ala Ser Gly Gly Gln Thr Phe His Ser Leu Leu Thr Ala Ser 145 150 Leu Pro Pro Arg Arg Asp Ser Thr Glu Ala Pro Lys Pro Lys Ser Ser Pro Glu Gln Pro Ile Gly Gln Gly Arg Ile Arg Val Gly Thr Gln Leu Arg Val Leu Gly Pro Glu Asp Asp Leu Ala Gly Met Phe 190 Leu Gln Ile Phe Pro Leu Ser Pro Asp Pro Arg Trp Gln Ser Ser Ser Pro Arg Pro Val Ala Leu Ala Leu Gln Gln Ala Leu Gly Gln Glu Leu Ala Arg Val Val Gln Gly Ser Pro Glu Val Pro Gly Ile Thr Val Arq Val Leu Gln Ala Leu Ala Thr Leu Leu Ser Ser Pro His Gly Gly Ala Leu Val Met Ser Met His Arg Ser His Phe Leu Ala Cys Pro Leu Leu Arg Gln Leu Cys Gln Tyr Gln Arg Cys Val Pro Gln Asp Thr Gly Phe Ser Ser Leu Phe Leu Lys Val Leu Leu Gln Met Leu Gln Trp Leu Asp Ser Pro Gly Val Glu Gly Gly Pro Leu Arg Ala Gln Leu Arg Met Leu Ala Ser Gln Ala Ser Ala Gly Arg Arg Leu Ser Asp Val Arg Gly Gly Leu Leu Arg Leu Ala Glu 335 Ala Leu Ala Phe Arg Gln Asp Leu Glu Val Val Ser Ser Thr Val 350 Arg Ala Val Ile Ala Thr Leu Arg Ser Gly Glu Gln Cys Ser Val 365 Glu Pro Asp Leu Ile Ser Lys Val Leu Gln Gly Leu Ile Glu Val 385 Arg Ser Pro His Leu Glu Glu Leu Leu Thr Ala Phe Phe Ser Ala

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Pro	Glu	Val	Val	Ser 470	Ser	Cys	Pro	Asp	Leu 475	Gln	Leu	Arg	Leu	Leu 480
Phe	Ser	Arg	Arg	Lys 485	Gly	Lys	Gly	Gln	Ala 490	Gln	Val	Pro	Ser	Phe 495
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Gln	Lys	Arg	Arg	Glu 560	Glu	Leu	Val	Leu	Arg 565	Val	Gln	Gly	Pro	Glu 570
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Leu	Pro	Leu	Leu	Leu 605	Ser	Cys	Cys	Cys	Gly 610	Asp	Asp	Glu	Ser	Val 615
Arg	Lys	Val	Thr	Glu 620	His	Leu	Ser	Gly	Cys 625	Ile	Gln	Gln	Trp	Gly 630
Asp	Ser	Val	Leu	Gly 635	Arg	Arg	Cys	Arg	Asp 640	Leu	Leu	Leu	Gln	Leu 645
Tyr	Leu	Gln	Arg	Pro 650	Glu	Leu	Arg	Val	Pro 655	Val	Pro	Glu	Val	Leu 660
Leu	His	Ser	Glu	Gly 665	Ala	Ala	Ser	Ser	Ser 670	Val	Cys	Lys	Leu	Asp 675
Gly	Leu	Ile	His	Arg 680	Phe	Ile	Thr	Leu	Leu 685	Ala	Asp	Thr	Ser	Asp 690

Ser Arg Ala Leu Glu Asn Arg Gly Ala Asp Ala Ser Met Ala Cys 695 Arg Lys Leu Ala Val Ala His Pro Leu Leu Leu Arg His Leu Pro Met Ile Ala Ala Leu Leu His Gly Arg Thr His Leu Asn Phe 725 730 Gln Glu Phe Arq Gln Gln Asn His Leu Ser Cys Phe Leu His Val 745 Leu Gly Leu Leu Glu Leu Leu Gln Pro His Val Phe Arg Ser Glu His Gln Gly Ala Leu Trp Asp Cys Leu Leu Ser Phe Ile Arg Leu Leu Leu Asn Tyr Arg Lys Ser Ser Arg His Leu Ala Ala Phe Ile Asn Lys Phe Val Gln Phe Ile His Lys Tyr Ile Thr Tyr Asn Ala 800 Pro Ala Ala Ile Ser Phe Leu Gln Lys His Ala Asp Pro Leu His 815 Asp Leu Ser Phe Asp Asn Ser Asp Leu Val Met Leu Lys Ser Leu Leu Ala Gly Leu Ser Leu Pro Ser Arg Asp Asp Arg Thr Asp Arg Gly Leu Asp Glu Glu Glu Glu Glu Ser Ser Ala Gly Ser Leu Pro Leu Val Ser Val Ser Leu Phe Thr Pro Leu Thr Ala Ala Glu Met Ala Pro Tyr Met Lys Arg Leu Ser Arg Gly Gln Thr Val Glu Asp Leu Leu Glu Val Leu Ser Asp Ile Asp Glu Met Ser Arg Arg Arg Pro Glu Ile Leu Ser Phe Phe Ser Thr Asn Leu Gln Arg Leu 920 Met Ser Ser Ala Glu Glu Cys Cys Arg Asn Leu Ala Phe Ser Leu Ala Leu Arg Ser Met Gln Asn Ser Pro Ser Ile Ala Ala Ala Phe 950 Leu Pro Thr Phe Met Tyr Cys Leu Gly Ser Gln Asp Phe Glu Val Val Gln Thr Ala Leu Arg Asn Leu Pro Glu Tyr Ala Leu Leu Cys 980 985 990

Gln Glu His Ala Ala Val Leu Leu His Arg Ala Phe Leu Val Gly
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Ala	Leu	Arg	Lys	Glu 395	His	Val	Asn	Pro	Pro 400	Ala	Glu	Val	Ser	Thr 405
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Phe	Arg	Ser	Gly	Asn 455	Ile	Glu	His	Pro	Glu 460	Asp	Lys	Leu	Phe	Asn 465
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Glu	Ala	Leu	Gln	Glu 485	Gly	Arg	Thr	Ala	Thr 490	Leu	Arg	Tyr	Pro	Arg 495
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Ala	Glu	Gly	Glu	Val 515	Asp	Pro	Ala	Phe	Gly 520	Pro	Leu	Glu	Ala	Leu 525
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Glu	Ile	Phe	Leu	Lys 545	Lys	Ala	Asp							
210 = 211 = 212 = 213 =	43 DNA		cial	Sequ	ience	e					•			
220 223		ithet	ic (	Oliac	onucl	leot i	ide I	Probe	9					
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and that other III with their their at